

Claims

1. A complex of a pharmaceutical compound selected from the group consisting of opioids, hormones, anaesthetics and chemotherapeutic agents comprising the reaction product of:
 - 5 (a) one or more phosphate derivatives of one or more opioids, steroid hormones, thyroid hormones, anaesthetics or chemotherapeutic agents having a phenolic, primary alcohol, secondary alcohol or tertiary hydroxyl group; and
 - (b) a complexing agent selected from the group comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids.
- 10 2. The complex according to claim 1 wherein the phosphate derivative is a phosphatide.
3. An oral formulation comprising a pharmaceutically acceptable carrier and the reaction product of:
 - 15 (a) one or more phosphate derivatives of one or more opioids, steroid hormones, thyroid hormones, anaesthetics or chemotherapeutic agents having a phenolic, primary alcohol, secondary alcohol or tertiary hydroxyl group; and
 - (b) a complexing agent selected from the group comprising amino acids having nitrogen functional groups and proteins rich in these amino acids.
- 20 4. The oral formulation according to claim 3 wherein the phosphate derivative is a phosphatide.
5. The oral formulation according to claim 3 wherein the complexing agent is selected from the group consisting of glycine, arginine, lysine, histidine, casein and mixtures thereof.
- 25 6. The oral formulation according to claim 3 further comprising an effective amount of the reaction product of:
 - (a) one or more phosphate derivatives of tocopherol; and
 - (b) a complexing agent selected from the group comprising amino acids having nitrogen functional groups and proteins rich in these amino acids.
7. The oral formulation according to claim 3 further comprising an enteric coating.

8. The oral formulation according to claim 3 further comprising a transfer protein or active domain attachment
9. A phosphatidyl derivative of a pharmaceutical compound selected from the group consisting of opioids, steroid hormones, thyroid hormones, anaesthetics or chemotherapeutic agents having a phenolic, primary alcohol, secondary alcohol or tertiary hydroxyl group.
- 5 10. The phosphatidyl derivative of a pharmaceutical compound according to claim 9 wherein the phosphatidyl group is complexed with a complexing agent selected from the group comprising amphoteric surfactants, cationic surfactants, amino acids having nitrogen functional groups and proteins rich in these amino acids.
- 10 11. A method for preparation of a phosphate derivative of a pharmaceutical compound selected from the group consisting of opioids, steroid hormones, thyroid hormones, anaesthetics or chemotherapeutic agents having a phenolic, primary alcohol, secondary alcohol or tertiary hydroxyl group comprising the step of reacting the pharmaceutical compound with P_4O_{10} in the presence of a sodium salt of a fatty acid.
- 15 12. The method according to claim 11 further comprising the step of reacting the product from the P_4O_{10} reaction with a di or mono acyl glyceride to form a phosphatide.
13. The method according to claim 11 wherein the pharmaceutical compound is selected from the group consisting of morphine (CAS 57-27-2), hydromorphone, oxymorphone, 20 levorphanol, codeine, oxycodone, nalbuphine, buprenorphine, butorphanol, pentazocine, nalorphine (CAS 62-67-9), naloxone, naltrexone, levallorphan, levothyroxine (CAS 51-48-9), paclitaxel (CAS 33069-62-4), alfaxalone (CAS 23930-19-0), estradiol (CAS 50-28-2), estrone (CAS 53-16-7), estriol (CAS 50-27-1), ethinyl estradiol, progestins, methyltestosterone, testosterone (CAS 58-22-0), nandrolone 25 (CAS 434-22-0) and danazol.
14. A phosphate derivative of a pharmaceutical compound selected from the group consisting of opioids, steroid hormones, thyroid hormones, anaesthetics or chemotherapeutic agents having a phenolic, primary alcohol, secondary alcohol or tertiary hydroxyl group.
- 30 15. The phosphate derivative according to claim 14 wherein the phosphate derivative is a phosphatidyl derivative.

16. Use of a phosphate derivative of a pharmaceutical compound selected from the group consisting of opioids, steroid hormones, thyroid hormones, anaesthetics or chemotherapeutic agents having a phenolic, primary alcohol, secondary alcohol or tertiary hydroxyl group to make a medicament for use in treating humans.
- 5 17. Use of a phosphate derivative of a pharmaceutical compound selected from the group consisting of opioids, steroid hormones, thyroid hormones, anaesthetics or chemotherapeutic agents having a phenolic, primary alcohol, secondary alcohol or tertiary hydroxyl group to make a medicament for use in treating animals.